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TRANSMITTAL FORM

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Total Number of Pages in This Submission

Application Number

10/615,051

Filing Date

July 7, 2003

First Named Inventor

Brian A. Vaartstra

Art Unit

2812

Examiner Name

Unknown

Attorney Docket Number

MI22-2308

ENCLOSURES (Check all that apply)

- Fee Transmittal Form
- Fee Attached
- Amendment/Reply
 - After Final
 - Affidavits/declaration(s)
- Extension of Time Request
- Express Abandonment Request
- Information Disclosure Statement
- Certified Copy of Priority Document(s)
- Response to Missing Parts/Incomplete Application
- Response to Missing Parts under 37 CFR 1.52 or 1.53

- Drawing(s)
- Licensing-related Papers
- Petition
- Petition to Convert to a Provisional Application
- Power of Attorney, Revocation
- Change of Correspondence Address
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- Request for Refund
- CD, Number of CD(s) _____

- After Allowance Communication to a Technology Center (TC)
- Appeal Communication to Board of Appeals and Interferences
- Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
- Proprietary Information
- Status Letter
- Other Enclosure(s) (please identify below):
Return Receipt Postcard; Form PTO-1449; Cited References

Remarks

EV372470700
The PTO did not receive the following
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual

Mark S. Matkin, Reg. No. 32,268
Wells St. John, P.S.

Signature

Date

11/17/04

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application Serial No. 10/615,051
Filing Date July 7, 2003
Inventorship Brian A. Vaartstra
Assignee Micron Technology, Inc.
Group Art Unit 2812
Examiner Unknown
Attorney's Docket No. MI22-2308
Customer No. 021567
Title: Methods of Forming a Phosphorus Doped Silicon Dioxide Comprising Layer,
and Methods of Forming Trench Isolation in the Fabrication of Integrated
Circuitry

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

References - See Attached Form PTO-1449

In compliance with 37 C.F.R. §§ 1.56, 1.97 and 1.98, your attention is directed to the United States patents and other references listed on the attached Form PTO-1449. Copies of the cited art are attached hereto. No admission is made regarding whether all the submitted references are prior art.

This Supplemental Information Disclosure Statement is being filed within three months of the filing date of the application or before the mailing of a first Office Action on the merits, whichever occurs last. Therefore, no fee is believed to be required. However, in the event that a fee is required for filing this Supplemental Information Disclosure Statement, please charge the fee specified under 37 C.F.R. § 1.17(p) to Deposit Account No. 23-0925.

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Respectfully submitted,

Dated: 11-17-04

By: 
Mark S. Matkin
Reg. No. 32,268

Form PTO-1449 <i>NOV 17 2004</i> PATENT & TRADEMARK OFFICE	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE LIST OF APPRAISED BY APPLICANT (Several sheets if necessary)	ATTORNEY DOCKET NO. MI22-2308	SERIAL NO. 10/615, 051
		APPLICANT: Brian A. Vaarstra	
		FILING DATE July 7, 2003	GROUP ART UNIT 2812

U.S. PATENT DOCUMENTS							
*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	3,990,927	11/1976	Montier			
	AB	4,474,975	10/1984	Clemons et al.			
	AC	5,156,881	10/1992	Okano et al.			
	AD	5,182,221	01/1993	Sato			
	AE	5,410,176	04/1995	Liou et al.	<i>EV372470700</i>		
	AF	5,470,798	11/1995	Ouellet			
	AG	5,719,085	02/1998	Moon et al.			
	AH	5,741,740	04/1998	Jang et al.			
	AI	5,776,557	07/1998	Okano et al.			

FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes No
	AJ	02277253A	11/1990	Japan (Hayashide et al.)			Abstract
	AK	146224	01/1996	Japan			
	AL	06-334031	12/1994	Japan			Abstract

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)		
	AM	Beekmann et al., <i>Sub-micron Gap Fill and In-Situ Planarisation using Flowfill™ Technology</i> , Electrotech 1-7 ULSI Conference, Portland, OR (October 1995).
	AN	Horie et al., <i>Kinetics and Mechanism of the Reactions of O(³P) with SiH₄, CH₃SiH₃, (CH₃)₂SiH₂, and (CH₃)₃SiH</i> , 95 J. PHYS. CHEM 4393-4400 (1991).
	AO	Joshi et al., <i>Plasma Deposited Organosilicon Hydride Network Polymers as Versatile Resists for Entirely Dry Mid-Deep UV Photolithography</i> , 1925 SPIE 709-720 (January 1993).
EXAMINER	DATE CONSIDERED	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-1449 O I P E S C I T E D P A T E N T & T R A D E M A R K O F F I C E L I S T O F C I T A T I O N S C I T E D B Y A P P L I C A N T (Several sheets if necessary)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2308	SERIAL NO. 10/615,051
	APPLICANT: Brian A. Vaarstra			
	FILING DATE July 7, 2003	GROUP ART UNIT 2812		

U.S. PATENT DOCUMENTS							
*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	5,786,039	07/1998	Brouquet			
	AB	5,801,083	09/1998	Yu et al.			
	AC	5,863,827	01/1999	Joyner			
	AD	5,883,006	03/1999	Iba			
	AE	5,888,880	03/1999	Gardner et al.	EV372470700		
	AF	5,895,253	04/1999	Akram			
	AG	5,904,540	05/1999	Sheng et al.			
	AH	5,930,645	07/1999	Lyons et al.			
	AI	5,943,585	08/1999	May et al.			

FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes
	AJ	05-315441	11/1993	Japan			Abstract

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)			
	AM	Kiermasz et al., <i>Planarisation for Sub-Micron Devices Utilising a New Chemistry</i> , Electrotech 1-2, DUMIC Conference, California (February 1995).	
	AN	Kojima et al., <i>Planarization Process Using a Multi-Coating of Spin-on-Glass</i> , V-MIC Conference, pp. 390-396 (June 13-14, 1988).	
	AO	Matsuura et al., <i>A Highly Reliable Self-planarizing Low-k Intermetal Dielectric for Sub-quarter Micron Interconnects</i> , 97 IEEE 785-788 (July 1997).	
EXAMINER		DATE CONSIDERED	
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			

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			APPLICANT: Brian A. Vaarstra	
			FILING DATE July 7, 2003	GROUP ART UNIT 2812

U.S. PATENT DOCUMENTS						
*Examiner's Initials		Document Number	Date	Name	Class	Subclass
	AA	5,950,094	09/1999	Lin et al.		
	AB	5,960,299	09/1999	Yew et al.		
	AC	5,972,773	10/1999	Liu et al.		
	AD	5,998,280	12/1999	Bergemont et al.		
	AE	6,030,881	02/2000	Papasouliotis et al.		
	AF	6,051,477	04/2000	Nam		
	AG	6,156,674	12/2000	Li et al.		
	AH	6,719,012	4/2004	Doan et al.		
	AI	6,583,028	6/2003	Doan et al.		
	AJ	5,570,469	6/1998	Uram et al.		
	AK					

EV372470700

FOREIGN PATENT DOCUMENTS						
		Document Number	Date	Country	Class	Subclass
	AL					

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)		
EXAMINER		DATE CONSIDERED
	AM	Matsuura et al., <i>Novel Self-planarizing CVD Oxide for Interlayer Dielectric Applications</i> ; 1994; 94 IEEE 117-120.
	AN	McClatchie et al. <i>Low Dielectric Constant Flowfill™ Technology for IMD Applications</i> , 7 pages (pre-August 1999).
	AO	Withnall et al., <i>Matrix Reactions of Methylsilanes and Oxygen Atoms</i> , 92 J. PHYS. CHEM. 594-602 (1988).

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Form PTO-149 PATENT & TRADEMARK OFFICE	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. MI22-2308	SERIAL NO. 10/615,051
ART CITED BY APPLICANT (Use several sheets if necessary)			APPLICANT: Brian A. Vaarstra	
			FILING DATE July 7, 2003	GROUP 2812

U.S. PATENT DOCUMENTS							
*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	5,105,253	04/1992	Pollock	357	49	
	AB	5,604,149	02/1997	Paoli et al.	437	67	
	AC	5,616,513	04/1997	Shepard	438	402	
	AD	5,786,263	07/1998	Perera	438	431	
	AE	5,895,255	04/1999	Tsuchiaki	438	427	
	AF	5,923,073	07/1999	Aoki et al.	257	501	
	AG	5,981,354	11/1999	Spikes et al.	438	424	
	AH	5,989,978	11/1999	Peidous	438	436	
	AI	6,033,961	03/2000	Xu et al.	438	295	

FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
	AL			EV372470700			Yes No

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)							
	AM	Curtis et al, "PCVD TEOS: O3 Advanced Trench Isolation Applications", Semiconductor Fabtech, 9 th Ed.,					
		p. 241 - 247					
	AN	George, S.M. et al., "Atomic layer controlled deposition of SiO ₂ and Al ₂ O ₃ using ABAB... binary reaction sequence chemistry", Applied Surface Science 82/83, Elsevier Science B.V., July 10, 1994, p. 460-467.					
	AO	Morishita et al. "Atomic-layer chemical-vapor-deposition of silicon-nitride", Applied Surface Science 112, Elsevier Science B.V., 1997, p. 198-204.					
EXAMINER		DATE CONSIDERED					
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

Form PTO-1449 O I P E NOV 17 2003 U.S. DEPARTMENT OF COMMERCE PATENT & TRADEMARK OFFICE CITED BY APPLICANT (Use several sheets if necessary)		ATTY. DOCKET NO. MI22-2308	SERIAL NO. 10/615,051
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U.S. PATENT DOCUMENTS							
*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	6,090,675	07/2000	Lee et al.	438	301	
	AB	6,171,962	01/2001	Karlsson et al.	438	692	
	AC	6,187,651	02/2001	Oh	438	435	
	AD	6,191,002	02/2001	Koyanagi	438	431	
	AE	6,326,282	12/2001	Park et al.	438	424	
	AF	6,329,266	11/2001	Hwang et al.	438	424	
	AG	6,355,966	03/2002	Trivedi	257	499	
	AH	6,583,060	06/2003	Trivedi	438	700	
	AI	10/806,923		Li et al.			03/22/2004

FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes
	AJ						No

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)							
	AK		Yokoyama et al. "Atomic layer controlled deposition of silicon nitride and in situ growth observation by infrared reflection absorption spectroscopy", Applied Surface Science 112, Elsevier Science B.V., 1997, p. 75-81.				
	AL		Gasser et al., "Quasi-monolayer deposition of silicon dioxide", Elsevier Science S.A., 1994, p. 213-218.				
	AM		Shareef et al., "Subatmospheric chemical vapor deposition ozone/TEOS process for SiO ₂ trench filling", J. Vac. Sci. Technol. B 13(4), Jul/Aug 1995, p. 1888-1892.				
	AN						
EXAMINER		DATE CONSIDERED				EV372470700	
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Form PTO-1449 PATENT AND TRADEMARK OFFICE LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. MI22-2308	SERIAL NO. 10/615,051
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U.S. PATENT DOCUMENTS							
*Examiner's Initials		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	6,448,150	09/2002	Tsai et al.	438	427	
	AB	6,617,251	09/2003	Kamath et al.	438	691	
	AC	2001/0006255 A1	07/2001	Kwon et al.	257	751	
	AD	2001/0006839 A1	07/2001	Yeo	438	435	
	AE	2001/0046753 A1	11/2001	Gonzalez et al.	438	424	
	AF	2002/0004284 A1	01/2002	Chen	438	427	
	AG	2004/0082181	04/2004	Doan et al.			
	AH	10/931,524		Sandhu			08/31/2004

FOREIGN PATENT DOCUMENTS							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes
	AJ						No

EV372470700

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, Etc.)								
	AJ		Disclosed Anonymous 32246, "Substrate Contact with Closed Bottom Trenches", Research Disclosure, Feb.					
			1991, 1 page.					
	AK							
	AL							
	AM							
EXAMINER		DATE CONSIDERED						
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								